*Research Article*

# Metacognitive Listening Comprehension Strategies of Arab English Language Learners

**Saleem Mohd Nasim** ⓘD

*English Language Unit, Preparatory Year Deanship, Prince Sattam Bin Abdulaziz University, Al-Kharj 31952, Saudi Arabia*

Correspondence should be addressed to Saleem Mohd Nasim; s.nasim@psau.edu.sa

Based on the premise that the higher the metacognitive awareness is, the more successful the learners are or vice versa; this study aimed at categorizing the metacognitive listening comprehension strategies (MLCS) of Arab EFL learners in the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University (PSAU), Saudi Arabia. The data of 353 participants (237 males and 116 females) collected through the Metacognitive Awareness Listening Questionnaire (MALQ) and analysed using descriptive statistical techniques showed that all participants were higher moderate users of all five subscales formed out of 21 strategies. However, their most preferred subscale was problem-solving and the least favourite was mental translation. Directed attention, planning and evaluation, and personal knowledge strategies ranked second, third, and fourth, respectively. Female and male respondents were also found to have preferred similar strategies. In other words, male and female Arab EFL learners did not differ much in employing the MLCS while listening to English texts. The pedagogical implications of being aware of MLCS were also discussed, along with suggestions for students, instructors, and syllabus designers to integrate explicit metacognitive instructions for preparing, planning, managing, monitoring, assessing, and reflecting on listening activities.

## 1. Introduction

There is seemingly a consensus among scholars that learners employ various techniques to make their learning effective. These techniques, called "learning strategies," "facilitate and make the learning process more enjoyable, self-directed, and effective" [1]. Even the notion of successful learners is discussed with reference to these strategies at times. Many scholars [1–9] have enumerated and described several such strategies. One of the sets of such learning strategies, centred on the construct of metacognition, is metacognitive strategies.

Flavell [10, 11] defines metacognition as "thinking of thinking" and Vandergrift et al. [12] define it as "the human ability to be conscious of one's mental processes" (p. 433). Goh [13] also termed the awareness of thinking and learning as metacognition. Metacognition consists of two parts: the knowledge of metacognition and its regulation [11, 14]. Brown [14] describes the knowledge part as consisting of

"declarative knowledge" (whatever learners know about themselves and the aspects that may influence their performance), "procedural knowledge" (the knowledge of how to use strategies), and "conditional knowledge" (knowledge of why and when to use strategies). Making plans, monitoring them, and assessing the learning process are arguably the components of the second part, i.e., the regulation of metacognition ([15, 16] Whitebread et al., 2009 as cited in [17]). These strategies assist learners to understand what they should do when they encounter problems in learning. Metacognitive strategies can assist students in maintaining track of their cognitive processes and figuring out why they engage in these processes, how to monitor them, and when to do so, that is why metacognition is regarded as a higher-order approach where learners take "active control over their cognitive processes (while) engaged in learning" (Livingston, 2003, as cited in [18]) and improve upon their learning.

Metacognitive strategies have been recognized as contributory to the advancement of foreign/second language

learning too. In fact, during the last three decades, numerous researchers have taken an interest in metacognition and language acquisition [19–29]. According to them, metacognitive awareness influences language learning development and the improvement of learners' thought processes. The employment of metacognitive strategies backs up language learning, using and storing information and retrieving it [30, 31]. It has also been proven that the success of a language learner depends on exploring the metacognitive strategies. Students who are aware of metacognitive strategies are found to be more successful than those who are unaware of metacognitive strategies [1, 32]. Goh [33] similarly verified a correlation between metacognitive awareness and effective learning in all learning contexts. Consequently, attempts have been made to characterize successful language learners and the kinds of strategies they employ in language learning exercises.

Recently, a group of researchers particularly focused on the relationship of metacognitive strategies with listening skills, asserting that these strategies could be used to support and improve students' listening comprehension [12, 34–36]. They opine that in the absence of efficacious strategies, listening comprehension becomes very difficult, demanding, and unproductive. In other words, if learners are aware of metacognitive strategies, they will deal with the difficulties in listening more actively and consciously rather than simply giving up [33]. Furthermore, learners can be categorized as low, average, and high achievers in listening as the use of metacognitive listening comprehension strategies (MLCS) projects the proficiency of learners. If their use of MLCS is low, then the teacher may instruct them to incorporate MLCS to make them better listeners. Therefore, it is imperative to identify students' employment of metacognitive strategies and classify them according to their level of metacognitive awareness.

## 2. A Review of Related Literature

Many studies have widely used both qualitative and quantitative methods to explore MLCS used by EFL/ESL learners, but among the quantitative methods, the Metacognitive Awareness Listening Questionnaire (MALQ) developed by Vandergrift et al. [12] is the most popular. The following will be a brief discussion of studies that adopted only the MALQ.

Thivyasreena [37] examined the MLCS of 100 Malaysian ESL undergraduates (11 males and 89 females) between 19 and 28 years of age, selected through a random sampling method. The data obtained through the MALQ along with the interview suggested that mental translation was the least used subscale, and the most commonly employed strategy was problem-solving. The overall mean score indicated that the awareness level of the respondents was moderately high. Suggestions were made for instructors to guide learners during listening activities, and the learners were recommended to do a self-check of their thought processes.

Alhaisoni [38] investigated the responses of randomly selected 104 Saudi male and female EFL medical students studying in their sixth year during the spring term of 2015-2016 at a Saudi university. The data showed that directed attention as well as problem-solving strategies were more frequently used, whereas the least used strategies were personal knowledge and mental translation. He concluded that teachers should assist learners in using the strategies they are least aware of and they (learners) should be exposed to an authentic L2 learning atmosphere.

Khiewsod [39] explored MLCS of 50 high school students (23 males and 27 females) aged 16–18 years in the academic year 2017 in Bangkok. The method used to obtain the data was the MALQ. The results showed that learners were reported to be higher moderate users of overall metacognitive strategies. Out of the five subscales, strategies under mental translation and problem-solving were used more frequently than any other group of strategies. The other three subsets, namely, directed attention, planning and evaluation, and personal knowledge, on the other hand, were utilized at a higher moderate level.

Altuwairesh [40] also administered the MALQ to 82 Saudi EFL female undergraduates. They addressed two research questions: the first was that, out of the five groups of MLCS, which one was mostly used by the participants while listening to the English texts? The other question was what MLCS did Saudi EFL female students prefer when listening to English texts? The findings suggested that problem-solving and directed attention strategies were preferred more frequently by the respondents than personal knowledge and mental translation strategies. The results also demonstrated that many L2 learners perceived listening in English as difficult, so investing time in the classroom to develop learners' strategies became meaningful.

Ratebi and Amirian [17] carried out their research with 60 first-year Iranian undergraduates (23 males and 37 females) with English as their major across high and low proficiency levels. They investigated various types of metacognitive strategies and their differences. This study concluded that high-proficiency listeners exploited metacognitive strategies more often than those who were less proficient and that participants used personal knowledge strategies least frequently and problem-solving strategies most frequently. The data also showed that low and high-proficiency listeners were significantly different when using personal knowledge strategies.

Another study conducted by Al-Alwan et al. [41] investigated the awareness of metacognitive listening strategies and their correlation with listening comprehension in three hundred and eighty-six (207 females and 179 males) 10th class EFL Jordanian students via two methods: (a) MALQ and (b) the listening comprehension test (LCT) developed by the researchers. The findings suggested an overall moderate level of MLCS in its subscales and individual items. The highest mean was related to the problem-solving subscale, whereas the personal knowledge subscale had the lowest mean.

Chen [42] investigated 195 (72 = 36.9% males and 123 = 63.1% females) first-year EFL students' awareness of MLCS while studying at a Taiwanese university using the MALQ. Learners were found to have a high level of awareness about metacognitive strategies. The results also showed that they were more alert to problem-solving
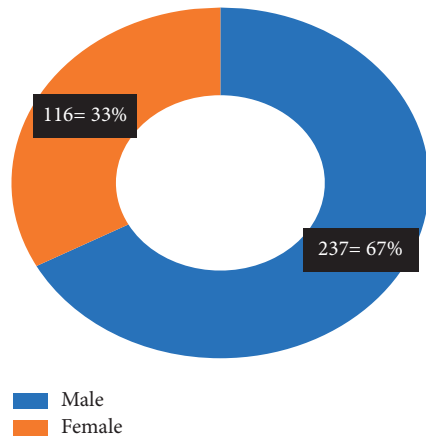
FIGURE 1: Sample distribution of the participants according to their gender.

TABLE 1: Distribution of items on subscales.

| Subscale | Items | Cronbach's alpha |
| --- | --- | --- |
| Directed attention (DA) | 2, 6, 12, and 16 | 0.72 |
| Mental translation (MT) | 4, 11, and 18 | 0.72 |
| Personal knowledge (PK) | 3, 8, and 15 | 0.67 |
| Planning and evaluation (PE) | 1, 10, 14, 20, and 21 | 0.78 |
| Problem-solving (PS) | 5, 7, 9, 13, 17, and 19 | 0.80 |
| Overall | | 0.74 |

strategies. Strategies in the category of personal knowledge were used less. In addition, learners' use of MLCS was significantly influenced by the time given to listening practice, perceptual efficacy in listening, age, and high school background. It was recommended that learners should be motivated to regulate their processes of learning, enhance their use of MLCS, and recognize effective strategies that lead to increased proficiency in listening.

Since the use of MLCS varies in terms of learners' variables in the process of SLA [43] and no researchers have paid attention towards distinguishing Arab EFL learners' MLCS based on their gender, this study, while indexing learners' MLCS, makes a distinction according to their gender, so that male and female learners can be given due attention. Hence, this research aims to answer the following questions:

RQ 1: Which subscale of the MLCS is used most and least by Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?

RQ 2: Which subscale of the MLCS is used most and least by male Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?

RQ 3: Which subscale of the MLCS is used most and least by female Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?

## 3. Methodology

The participants, selected through a convenience sampling method, were 353 (237 male and 116 female) first-year and second-semester EFL students of the Preparatory Year Deanship (PYD) at Prince Sattam bin Abdulaziz University, Saudi Arabia. They were 16–23 years old and native speakers of Arabic. The majority of the people were Saudis, apart from the citizens from some other countries like Sudan, Egypt, Jordan, Algeria, and Syria. All students had a minimum of nine years of exposure to English before entering the program. They had already studied Q: Skills for Success, Special

Edition, Level 2 Reading and Writing Book in the first semester. At the time of the research, they were studying Q: Skills for Success, Special Edition, Level 2 Listening and Speaking, published by OUP. The demographic information of the learners is shown in Figure 1.

## 4. Instrument

This study is quantitative in design, and the researcher used the Metacognitive Awareness Listening Questionnaire (MALQ), developed and validated by Vandergrift et al. [12], and to it was appended a demographic question to know the gender of the participants. This had 21 metacognitive listening comprehension strategies (MLCS), usually grouped into five subscales, namely, problem-solving (making inferences and observing them), directed attention (helping learners to pay attention and remain focused), planning and evaluation (self-preparation and performance appraisal), personal knowledge (perceptions of task difficulty and self-efficacy), and mental translation (grammar translation) strategies. The distribution of 21 strategies or items into five discrete groups is given in Table 1.

These 21 statements were rated on a six-point Likert scale, ranging from 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = partially agree, 5 = agree, and 6 = strongly agree. There was no neutral point for participants to avoid hedging. The choices made by them were preferences for their MLCS, which they made when they listened to English text. The reliability coefficient of the Cronbach alpha of the subscales was 0.74 for problem-solving, 0.68 for directed attention, 0.75 for planning and evaluation, 0.78 for mental translation, and 0.74 for personal knowledge, respectively [12]. The reliability measured for the whole questionnaire was 0.86. The validity of the instrument was determined by its developers by administering it to a large sample. The validity of the content was checked by a bilingual professor after the MALQ was translated into Arabic to help students understand the statements better. It was administered online through Google Forms and distributed among them. The students were also provided with instructions on how to answer the questionnaire.

## 5. Data Analysis

There were three research questions, and all of them were aimed at answering the most and least frequent groups of MLCS used by the 353 Arab EFL learners, including male and female

TABLE 2: Distribution of mean scores and SD of all participants' responses to MLCS (subscale) ($N = 353$).

| Strategy | Strongly disagree (%) | Disagree (%) | Slightly disagree (%) | Partly agree (%) | Agree (%) | Strongly agree (%) | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| PS | 12 | 6 | 14 | 14 | 25 | 30 | 4.23 | 1.15 |
| DA | 13 | 9 | 12 | 16 | 28 | 23 | 4.06 | 1.03 |
| PE | 13 | 10 | 17 | 16 | 21 | 23 | 3.92 | 1.18 |
| PK | 14 | 10 | 18 | 19 | 18 | 21 | 3.81 | 1.15 |
| MT | 16 | 14 | 12 | 21 | 15 | 21 | 3.68 | 1.22 |
| All groups | 14 | 10 | 15 | 17 | 21 | 24 | 3.94 | 1.15 |

students. To analyse the data, the Statistical Package for Social Sciences (SPSS-25) and Microsoft Excel were used. To calculate the mean scores and standard deviations, responses to 21 items were transformed into five groups (as they are categorized by the developers of the MALQ) using the compute variable option and then subjected to descriptive data analysis. After that, all 21 metacognitive strategies were combined into five subscales and their responses were calculated through crosstabs. For the sake of interpretation, participants' preferences ranging from 1 = strongly disagree, 2 = disagree, and 3 = slightly disagree were combined into one category as negative preferences, and those from 4 = partially agree, 5 = agree, and 6 = strongly agree were classified as positive preferences. The means and SDs of the five subsets were interpreted according to the following criteria: 5.17–6.00 = highest use of the strategy; 4.34–5.16 = high use of the strategy; 3.51–4.33 = higher moderate use of the strategy; 2.68–3.50 = lower moderate use of the strategy; 1.84–2.67 = low use of the strategy; and 1.00–1.83 = lowest use of the strategy [37].

## 6. Results

To answer the first research question, i.e., "which subscale of the MLCS is used most and least by Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?" the percentage of all students' responses and their mean and standard deviations (groupwise) are given in Table 2.

Of all the five groups of MALQ, problem-solving ($M = 4.23$ with 68% positive preferences and 32% negative preferences) was reported to be the most used and mental translation ($M = 3.68$ with 57% positive preferences and 43% negative preferences) was found to be the least preferred one. Participants ranked the directed attention, planning and evaluation, and personal knowledge subscales as the second ($M = 4.06$ with 66% positive preferences and 34% negative preferences), third ($M = 3.92$ with 60% positive preferences and 40% negative preferences), and fourth ($M = 3.81$ with 58% positive preferences and 42% negative preferences), respectively. The overall mean was 3.94 (with 62% of positive preferences and 38% of negative preferences). All the mean scores suggested a higher moderate use when measured on the scale, except for MT.

To answer the second research question, i.e., "which subscale of the MLCS is used most and least by male Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?" the percentage of male students' responses and their means with standard deviations (groupwise) are given in Table 3.

Out of five groups of MLCS, problem-solving ($M = 4.22$, with 68% positive preferences and 32% negative preferences) was found to be the most preferred and mental translation ($M = 3.60$, with 55% positive preferences and 45% negative preferences) was found to be the least preferred by male Arab EFL students. The male participants ranked the directed attention, planning and evaluation, and personal knowledge subscales second ($M = 4.02$, with 66% positive preferences and 34% negative preferences), third ($M = 3.85$, with 59% positive preferences and 41% negative preferences), and fourth ($M = 3.76$, with 55% positive preferences and 45% negative preferences), respectively. The overall mean was 3.89 (with 61% of positive preferences and 39% of negative preferences). All the mean scores indicated a higher moderate level of awareness when measured on the scale.

For answering the third and final research question, i.e., "which subscale of the MLCS is used most and least by female Arab EFL learners at the Preparatory Year Deanship (PYD), Prince Sattam bin Abdulaziz University?" the percentage of female students' responses and their means with standard deviations (group-wise) are given in Table 4.

The results of the female respondents were also similar to those of the male respondents. Out of five groups of MLCS, problem-solving ($M = 4.26$, with 69% positive preferences and 31% negative preferences) was the most frequently used subscale and mental translation ($M = 3.84$, with 61% positive preferences and 39% negative preferences) was the least favourite one among female learners. They also ranked the directed attention, planning and evaluation, and personal knowledge subscales as the second ($M = 4.13$, with 67% positive preferences and 33% negative preferences), third ($M = 4.05$, with 63% positive preferences and 37% negative preferences), and fourth ($M = 3.91$, with 60% positive preferences and 40% negative preferences), respectively. The overall mean was 4.05 (with 61% of positive preferences and 39% of negative preferences). All mean scores suggested a higher moderate use when measured on the scale.

## 7. Discussion

The findings can be interpreted as follows. The mean scores of the whole sample ($N = 353$, $M = 3.94$) and the male ($N = 237$, $M = 3.89$) and female samples ($N = 116$, $M = 4.04$) indicated that Arab EFL learners possessed a higher moderate level of MLCs. The mean scores of all five groups for the sample of all students ($N = 353$, $M = 3.68–4.23$) and males ($N = 237$, $M = 3.60–4.22$) and females ($N = 116$, $M = 3.84–4.26$) suggested a higher moderate level of MLCs.

TABLE 3: Distribution of mean scores and SD of males' responses to MLCS (subscale) ($N = 237$).

| Strategy | Strongly disagree (%) | Disagree (%) | Slightly disagree (%) | Partly agree (%) | Agree (%) | Strongly agree (%) | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| PS | 12 | 6 | 14 | 14 | 25 | 29 | 4.22 | 1.17 |
| DA | 13 | 9 | 13 | 16 | 28 | 21 | 4.02 | 1.01 |
| PE | 14 | 10 | 17 | 17 | 20 | 22 | 3.85 | 1.18 |
| PK | 14 | 10 | 18 | 19 | 19 | 19 | 3.76 | 1.18 |
| MT | 18 | 14 | 13 | 20 | 15 | 20 | 3.60 | 1.20 |
| All groups | 14 | 10 | 15 | 17 | 21 | 22 | 3.89 | 1.15 |

TABLE 4: Distribution of mean scores and SDs with females' responses to MLCS (subscales) ($N = 116$).

| Strategy | Strongly disagree (%) | Disagree (%) | Slightly disagree (%) | Partly agree (%) | Agree (%) | Strongly agree (%) | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| PS | 11 | 6 | 14 | 14 | 25 | 31 | 4.26 | 1.12 |
| DA | 13 | 9 | 11 | 14 | 27 | 27 | 4.13 | 1.05 |
| PE | 10 | 11 | 16 | 14 | 23 | 25 | 4.05 | 1.16 |
| PK | 14 | 10 | 17 | 18 | 16 | 26 | 3.91 | 1.08 |
| MT | 13 | 14 | 11 | 22 | 15 | 24 | 3.84 | 1.24 |
| All groups | 12 | 10 | 14 | 17 | 21 | 26 | 4.04 | 1.13 |

The findings also revealed that problem-solving was the most preferred strategy group and mental translation was found to be the least preferred by all learners. The respondents ranked the directed attention, planning and evaluation, and personal knowledge subscales as second, third, and fourth, respectively. The male and female students ranked their MLCS likewise.

Further analysis of the mean scores of the five subscales revealed that all participants ($N = 353$) used problem-solving and directed attention more frequently than mental translation, planning and evaluation, and personal knowledge strategies. The same is the case with male students ($N = 237$). However, female learners ($N = 116$) reported planning and evaluation, in addition to problem-solving and directed attention, as their favourite strategies. For them, the least used strategies were mental translation and personal knowledge.

The positive responses for strategies under the problem-solving subset were more than 68% across all categories. This shows that students utilized not only their previous knowledge and experience to understand oral texts but also the words and the central idea of the text to predict the meaning of unfamiliar words. They also compared their new understanding with the knowledge they had earlier about the subject and reflected on their earlier oral input to cross-check whether it conveyed proper sense or not. While doing so, they made corrections to their interpretation if they found it incorrect. Employing strategies associated with the problem-solving subscale more often than others could be the result of giving priority to the objectives of the listening tasks and considering other strategies as less important. This can be justified on the basis that problem-solving deals with techniques that are used to complete listening tasks and it is the completion of the tasks that are graded.

Directed attention strategies are also generally preferred by proficient listeners [17, 33, 38, 41, 42]. Given the second place in the list of five, with more than 66% of positive responses by all factions, i.e., males and females and all students, this group of strategies indicated that the subjects

focused harder and did not give up when they had trouble understanding. Furthermore, they were able to return to the track when they lost concentration and recover it when their minds were diverted. The use of instructional technology could have been a possible reason for this.

In addition to directed attention and problem-solving strategies, female participants showed a noticeable preference for the strategies in the planning and evaluation groups. Their responses to this cluster were more than male students (59%) and all students combined (60%), which means that females were better than males in planning and evaluation. They better planned how they would listen beforehand and thought of making a comparison between the previously listened oral texts and what they were going to listen to. They set their objectives occasionally and self-questioned the level of their comprehension during listening. A self-evaluation was also conducted after listening to the oral text to determine what improvements could be made in the future. They learned how to organize, outline, and summarize the ideas taught explicitly in the class. Other studies [38, 41, 44, 45] found planning and evaluation to be important, but their data included the entire population. Altuwairesh [40], whose subjects were all females, said nothing about planning and evaluation as a group, although items 1, 14, and 21 were among the dominant ones.

According to the results, the penultimate subscale in the list of five is the personal knowledge, which concentrates on students' perceptions of difficulty in listening. The responses on this subscale were more than 57% for all categories, which suggested that participants were not nervous while listening to English. They reported that understanding the meaning of oral texts in this language was more challenging than reading, speaking, or writing texts they might have listened to. They found listening comprehension less difficult in general. These findings are in line with Chang [46], Khiewsod [39], and Chin et al. [47]. Personal knowledge scores certify that listening (in English) is difficult for them, and this might be the reason they translated the oral texts

into Arabic to understand. This may create anxiety among them and a negative attitude towards English.

The mean scores of the mental translation group were classified as higher moderate use. The responses to the mental translation strategies were more than 57% in all students. Male students used it less (55%) than female students (61%). This signified that all learners (males and females) were habitually translating (English into Arabic) the oral texts in their heads as they listened to them. This was applied to keywords as well as word-by-word translation for that matter. From the point of view of Vandergrift et al. [12], this is a cluster of strategies that proficient learners are supposed not to use much because students generally fail to activate their conceptual processes and become incompetent users. Therefore, a lower mean score is considered better in mental translation.

The reasons for exploiting mental strategies for word-for-word translation, in particular, could be their cultural habit of memorization, lack of exposure to strategies of language learning, and the desire to make listening tasks easier and quicker to understand. Another reason could be that in most of the schools, they are taught English by Arab teachers through the grammar translation method, and spending nine years, there would have made them habituated to translation. Tafaroji Yeganeh [48] discovered that bilingual students use mental translation more than monolinguals. Esmaeili et al. [44] and Adnan Mohammad et al. [49] also found a higher mean in mental translation.

## 8. Conclusions and Recommendations

This research explored the most and least preferred groups of MLCS in Arab male and female EFL undergraduates. It was found that problem-solving was the most and mental translation was the least used subscale by all students as a whole, as well as male and female learners. All groups of strategies belong to the higher moderate level. Participants' responses also corroborated these results.

The results indicate that the participants had an overall satisfaction level with the use of MLCS as a whole and gender-wise. They were on the border in terms of awareness and should be given metacognitive instructions to do better, especially in mental translation, as keywords and content words were given importance for comprehending the listening text, not for translation. Other strategies that need to be reinforced are the personal knowledge and self-knowledge because anxiety is also a hindrance in the way of learning. Therefore, attempts should be made to lower the "affective filter." The male participants should focus on planning and evaluation skills as well. The bright side is that they were able to do better on problem-solving because inference-making and predicting skills were explicitly taught in the book they were studying.

Metacognitive awareness provides an index of users' cognitive processes for listening comprehension. The MLCS instruction helps track and stimulate those processes. After knowing their practices and beliefs about listening, teachers and curriculum designers can help create better learning opportunities for them. Instructors can make them aware of the importance of metacognition and the MLCS, and curriculum designers can include more attention-drawing tasks to motivate learners [50].

Finally, this study was limited to a university and a moderate sample only. Therefore, generalizations should be made contextually and carefully. Further explorations are recommended in similar contexts to explore the choice of metacognitive listening comprehension strategies.

## Data Availability

The data used to support this study are included in the article.

## Conflicts of Interest

The author declares that there are no conflicts of interest.

## Acknowledgments

## References

[1] R. L. Oxford, *Language Learning Strategies: What Every Teacher Should Know*, The Newbury House Harper Collins, New York, NY, USA, 1990.

[2] R. Ellis, *The Study of Second Language Acquisition*, Oxford University Press, Oxford, UK, 1994.

[3] A. Wenden, *Learner Strategies for Learner Autonomy*, Prentice-Hall, New York, NY, USA, 1991.

[4] J. O'Malley and A. Chamot, *Learning Strategies in Second Language Acquisition*, Cambridge University Press, Cambridge, UK, 2012.

[5] K. Willing, *Learning Styles in Adult Migrant Education*, NCRC Research Series, Australia, 1988.

[6] J. Rubin, "Learner strategies: theoretical assumptions, research history, and typology," in *Learner Strategies in Language Learning*, A. Wenden and J. Rubin, Eds., pp. 15–30, Prentice-Hall International, London, UK, 1987.

[7] E. Bialystok, "The role of conscious strategies in second language proficiency," *The Modern Language Journal*, vol. 65, no. 1, pp. 24–35, 1981.

[8] N. Naiman, M. Froanhlich, H. H. Stern, and A. Toedesco, *The Good Language Learner*, Ontario Institute for Studies in Education (OISE), Toronto, Canada, 1978.

[9] H. H. Stern, "What can we learn from the good language learner?" *The Canadian Modern Language Review*, vol. 31, no. 4, pp. 304–319, 1975.

[10] J. H. Flavell, "Metacognitive aspects of problem solving," in *The Nature of Intelligence*, L. B. Resnick, Ed., Erlbaum, Hillsdale, NJ, USA, 1976.

[11] J. H. Flavell, "Metacognition and cognitive monitoring: a new area of cognitive-developmental inquiry," *American Psychologist*, vol. 34, no. 10, pp. 906–911, 1979.

[12] L. Vandergrift, C. C. M. Goh, C. J. Mareschal, and M. H. Tafaghodtari, "The metacognitive awareness listening questionnaire: development and validation," *Language Learning*, vol. 56, no. 3, pp. 431–462, 2006.

[13] C. Goh, "Metacognitive instruction for second language listening development: theory, practice, and research implications," *RELC Journal*, vol. 39, no. 2, pp. 188–213, 2008.

[14] A. L. Brown, "Knowing when, where, and how to remember; a problem of metacognition," *Advances in Instructional Psychology*, vol. 1, pp. 77–165, 1978.

[15] G. Schraw, K. J. Crippen, and K. Hartley, "Promoting self-regulation in science education: metacognition as part of a broader perspective on learning," *Research in Science Education*, vol. 36, no. 1-2, pp. 111–139, 2006.

[16] D. R. Cross and S. G. Paris, "Developmental and instructional analyses of children's metacognition and reading comprehension," *Journal of Educational Psychology*, vol. 80, no. 2, 1988.

[17] Z. Ratebi and Z. Amirian, "The use of metacognitive strategies in listening comprehension by Iranian university students majoring in English: a comparison between high and low proficient listeners," *Journal of Studies in Education*, vol. 3, no. 1, pp. 140–154, 2013.

[18] M. M. Haque, "Metacognition: a catalyst in fostering learner autonomy for ESL/EFL learners," *Korea TESOL Journal*, vol. 14, no. 1, pp. 181–202, 2018.

[19] L. Baker and A. Brown, "Metacognitive skills and reading," in *Handbook of Reading Research*, P. D. Pearson, Ed., Longman, New York, NY, USA, 1984.

[20] B. J. Zimmerman and A. Bandura, "Impact of self-regulatory influences on writing course attainment," *American Educational Research Journal*, vol. 31, no. 4, pp. 845–862, 1994.

[21] L. Vandergrift, "The comprehension strategies of second language (French) listeners: a descriptive study," *Foreign Language Annals*, vol. 30, no. 3, pp. 387–409, 1997.

[22] L. Vandergrift, "Orchestrating strategy use: toward a model of the skilled second language listener," *Language Learning*, vol. 53, no. 3, pp. 463–496, 2003.

[23] J. E. Purpura, "An analysis of the relationships between test takers' cognitive and metacognitive strategy use and second language test performance," *Language Learning*, vol. 47, no. 2, pp. 289–325, 1997.

[24] C. C. Goh, "How ESL learners with different listening abilities use comprehension strategies and tactics," *Language Teaching Research*, vol. 2, no. 2, pp. 124–147, 1998.

[25] A. E. Rasekh and R. Ranjbary, "Metacognitive strategy training for vocabulary learning," *TESL-EJ*, vol. 7, no. 2, 2003.

[26] R. S. Nickerson, D. N. Perkins, and E. E. Smith, *The Teaching of Thinking*, Lawrence Erlbaum Associates, Hillsdale, NJ, USA, 1985.

[27] L. Jun Zhang, "Awareness in reading: EFL students' metacognitive knowledge of reading strategies in an acquisition-poor environment," *Language Awareness*, vol. 10, no. 4, pp. 268–288, 2001.

[28] L. J. Zhang, "A dynamic metacognitive systems account of Chinese university students' knowledge about EFL reading," *Tesol Quarterly*, vol. 44, no. 2, pp. 320–353, 2010.

[29] W. T. Tseng, Z. Dörnyei, and N. Schmitt, "A new approach to assessing strategic learning: the case of self-regulation in vocabulary acquisition," *Applied Linguistics*, vol. 27, no. 1, pp. 78–102, 2006.

[30] R. C. Scarcella and R. L. Oxford, *The Tapestry of Language Learning: The Individual in the Communicative Classroom*, Heinle & Heinle, Boston, MA, USA, 1992.

[31] R. L. Oxford, "Research update on teaching *L*2 listening," *System*, vol. 21, no. 2, pp. 205–211, 1993.

[32] H. D. Brown, *Principles of Language Learning and Teaching*, Longman, New York, NY, USA, 2000.

[33] C. C. Goh, "A cognitive perspective on language learners' listening comprehension problems," *System*, vol. 28, no. 1, pp. 55–75, 2000.

[34] L. Vandergrift, "It was nice to see that our predictions were right': developing metacognition in *L*2 listening comprehension," *The Canadian Modern Language Review*, vol. 58, no. 4, pp. 555–575, 2002.

[35] S. Selamat and G. K. Sidhu, "Student perceptions of metacognitive strategy use in lecture listening comprehension," *Language Education in Asia*, vol. 2, no. 2, pp. 185–198, 2011.

[36] M. Rahimi and M. Katal, "Metacognitive listening strategies awareness in learning English as a foreign language: a comparison between university and high-school students," *Procedia-Social and Behavioral Sciences*, vol. 31, pp. 82–89, 2012.

[37] M. P. Thivyasreena, "Metacognitive awareness of listening strategies among Malaysian ESL learners/Thivyasreena, Muthuvelu Pillai," Master's thesis, University of Malaya, Kuala Lumpur, Malaysia, 2018.

[38] E. Alhaisoni, "Metacognitive listening strategies used by Saudi EFL medical students," *English Language Teaching*, vol. 10, no. 2, pp. 114–122, 2017.

[39] M. P. Khiewsod, "Metacognitive listening strategies used by high school students in Bangkok," Doctoral dissertation, Thammasat University, Phra Nakhon, Thailand, 2016.

[40] N. Altuwairesh, "EFL Saudi undergraduate students' use of metacognitive listening strategies," *SSRN Electronic Journal*, vol. 7, no. 1, pp. 78–93, 2016.

[41] A. Al-Alwan, S. Asassfeh, and Y. Al-Shboul, "EFL learners' listening comprehension and awareness of metacognitive strategies: how are they related?" *International Education Studies*, vol. 6, no. 9, pp. 31–39, 2013.

[42] Z. Chen, "University EFL learners' awareness of metacognitive listening comprehension strategies in Taiwan," in *Proceedings of the Cross-University International Conference on English Teaching*, Taipei, Taiwan, May 2010.

[43] S. M. Bacon and M. D. Finnemann, "A study of the attitudes, motives, and strategies of university foreign language students and their disposition to authentic oral and written input," *The Modern Language Journal*, vol. 74, no. 4, pp. 459–473, 1990.

[44] Z. Esmaeili, S. Taki, and Y. Rahimian, "EFL Learners' metacognitive strategy use in academic listening tasks," *Journal of Applied Linguistics and Language Research*, vol. 4, no. 3, pp. 254–268, 2017.

[45] M. Rahimi and M. Katal, "Iranian university students' metacognitive listening strategies awareness in learning English," in *Proceedings of the Paper Presented at the 3rd National Conference on Education*, Tehran, Iran, May 2010.

[46] C.-W. Chang, "Metacognitive awareness in English listening: a study of Taiwanese non-English majors," *Journal of National Formosa University*, vol. 31, no. 3, pp. 75–90, 2013.

[47] C. L. Chin, N. Unin, and A. Johari, "Metacognitive awareness strategies for listening comprehension," *AJELP: The Asian Journal of English Language and Pedagogy*, vol. 5, pp. 11–19, 2017.

[48] M. TafarojiYeganeh, "Metacognitive listening strategies awareness in monolingual versus bilingual EFL learners," *Procedia-Social and Behavioral Sciences*, vol. 70, pp. 1787–1793, 2013.

[49] K. M. Adnan Mohammad, M. Kaur Mehar Singh, and M. Ganapathy, "Metacognitive awareness in academic listening: a case study of Jordanian postgraduate students," *Malaysian Journal of Languages and Linguistics (MJLL)*, vol. 5, no. 1, 2016.

[50] D. Zhang and C. C. Goh, "Strategy knowledge and perceived strategy use: Singaporean students' awareness of listening and speaking strategies," *Language Awareness*, vol. 15, no. 3, pp. 199–119, 2006.